

## PARK MANAGEMENT AND PLANNING DOCUMENTS

It is important that AML sites be addressed in park management and planning documents. This serves three important functions. First, the park must examine the extent of AML issues and develop a remediation strategy. Secondly, the stated policies and objectives presented become an action guide for park management and staff. Lastly, the documents serve as an educational tool for the interested public, and demonstrate an active concern on the part of the park.

Generally, management documents for parks with AML sites should include statements that:

- 1) Abandoned mines exist and are hazardous
- 2) The park has a program to identify and correct hazards and resource impacts.
- 3) Visitors will be advised of hazardous mines.
- 4) Remediation accomplished is dependent on available funding and other priorities.

The following paragraphs are a suggested AML section for the backcountry and wilderness management plan for Big Rock National Monument.

### Abandoned Mineral Lands

**Safety:** There are at least 27 abandoned mines in eight mining districts within Big Rock National Monument. Topographic maps published by USGS show approximately 140 shafts and tunnels in backcountry and wilderness areas. Many more openings certainly exist, along with numerous shallow pits and prospects. Abandoned mines are popular destinations and offer visitors the opportunity to experience some of the history of the area, but they also present a significant risk of injury or death.

Potential hazards include falls into open mine shafts and pits, rockfalls and cave-ins in tunnels and adits, bad air, explosive gases, toxic substances, and dangerous wildlife. Underground cave-ins sometimes break through to the surface and can engulf unsuspecting people. Underground openings are often hidden by darkness and there is the danger of falling. Old explosives are extremely unstable and often encountered. Old buildings and equipment may collapse without warning. The remoteness of many mines makes emergency assistance very difficult. Additionally, rescues or body recoveries from abandoned mines are extremely hazardous and, in some cases, impossible.

Big Rock National Monument has developed a program to identify mine hazards, correct safety problems, and warn visitors of potential hazards. Mine openings are inventoried and evaluated for their hazards, amount of visitor use, the risks in performing a rescue, and environmental degradation. Priorities for remediating abandoned mines are established by ranking their hazards and environmental impacts. If a problem is identified, a more detailed investigation will be conducted and a plan developed to mitigate or remediate the problem. Potentially hazardous materials will be investigated and disposed of in accordance with appropriate State, NPS, and other Federal regulations.

The preceding text includes all the elements of a thorough AML program. This level of detail is important for two reasons. First, the public should know that there are hazardous abandoned mines in the park and that NPS has a remediation program. However, with limitations on funding and personnel, the work may be slow and many hazards will remain for some time. Secondly, this text offers the park an opportunity to present a management position with regard to abandoned mines, including a step-by-step approach to correct the problems. Such a clearly-stated approach will be useful in guiding park staff in the future and in supporting future funding requests.

Much less detailed text is appropriate for the Statement for Management:

Abandoned mines present a significant potential health and safety hazard for visitors and also impact natural resources. Big Rock National Monument has an active program to identify hazards and environmental impacts, and mitigate the most severe problems. Several shafts and adits have been capped with steel grates, backfilled, or closed with cable nets. Other mine openings will be filled or closed, in priority order, as funding and staff time are available. Visitors will be warned of the hazards that may be encountered at abandoned mines.